



COUNTY OF LOS ANGELES

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June 30, 2004

To: Supervisor Don Knabe, Chairman
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Supervisor Michael D. Antonovich

From: Jon W. Fullinwider
Chief Information Officer

Dave Lambertson, Interim Director
Internal Services Department

Subject: **MODERN TELEPHONE SYSTEMS**

This memorandum is to provide your Board with an update on activities related to the implementation of modern telephone systems in the County.

Historically, telephone systems and data systems have used separate building networks and separate wide area networks. The newest telephone systems make use of the Internet Protocol (IP) to transmit telephone calls over the same building network and wide area network infrastructure that is currently used for our data systems. This approach is most commonly referred to as Voice over IP (VoIP). VoIP systems overcome some of the limitations of traditional telephone systems, including:

- ☐ Additional costs by using separate building wiring for data and voice transmission.
- ☐ Lack of integration of voice mail and e-mail on desktop computers.
- ☐ Significant costs associated with telephone instrument relocation.
- ☐ Lack of full phone number portability (i.e., the same phone number can be transferred from one physical location to another location).

Market analysts predict that by 2007 the majority of telephone systems sold in the country will be IP based. All major manufacturers have begun phasing out their conventional PBX products. Therefore, it is critical that the County prepares for this change.

The Internal Services Department (ISD), Community Development Commission, and the Sheriff's Department (Sheriff) have implemented new VoIP telephone systems at some of their facilities and other departments are interested in doing the same. However, currently there are no industry interoperability standards for these systems. Each manufacturer has implemented their own proprietary systems and, therefore, no two manufacturers' systems will directly interoperate (i.e., communicate seamlessly) with each other. Without industry-wide interoperability standards, the County needs to standardize on a single manufacturer's platform as we move into IP telephone systems. To do otherwise would result in multiple realms of voice communication and needless gateways and transition points, increasing the cost and complexity of voice communications in the County.

An interdepartmental committee developed a Request for Information (RFI) which was issued by ISD. The RFI was used to solicit information from the industry to determine which IP telephone system(s) would provide the County with the best functionality and integration with the existing voice and data networks. Responses were received from Alcatel, Avaya, Cisco, Mitel, MCI, NEC, and Nortel. An evaluation committee of representatives from ISD, Chief Information Office (CIO), Sheriff, Department of Health Services (DHS), Information Systems Advisory Body (ISAB), and the Department of Public Social Services (DPSS) formally reviewed and scored the responses. The response from Cisco received the highest score and was determined to be the best IP telephone system for use in the County at this time.

The Cisco IP telephone system will be added to the existing Telecommunications Equipment and Services Master Agreement (TESMA) in a new category. ISD will issue a solicitation for system integrators and distributors to be added to TESMA to support this new category. These TESMA qualified system integrators and distributors will have the opportunity to provide the County competitive bids on the Cisco IP telephone systems if, and when, new telephone systems are required at County facilities. When the industry adopts interoperability standards for IP telephone systems, compatible systems from other manufacturers will be added to TESMA.

The implementation of IP telephone systems is part of our overall converged networks strategy. Unless there is extenuating business or technical requirements that have been reviewed and approved by the CIO, only IP telephone systems will be implemented when new or upgraded telephone systems are needed in County facilities. CIO and ISD staff will be working with departments on an enterprise-wide architecture and the implementation and operational support services for IP telephone systems.

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For additional information, please contact Dennis Shelley, of the CIO, at 562.940.3935 or David Mayer, of ISD, at 562.940.2907.

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